

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-043253
 (43)Date of publication of application : 16.02.1999

(51)Int.Cl.

B65H 31/00
 B41J 29/00
 G03G 15/00
 G03G 15/00
 H04N 1/00
 H04N 1/00

(21)Application number : 09-212751

(71)Applicant : RICOH CO LTD

(22)Date of filing : 24.07.1997

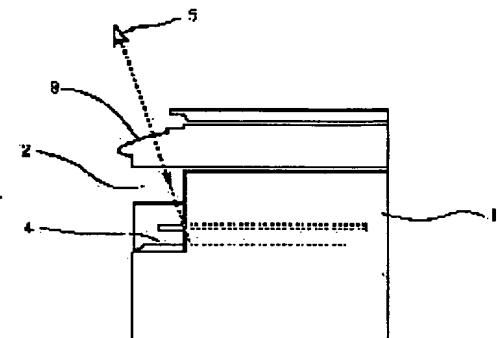
(72)Inventor : YOSHINAMI HIDEKI
 TANAKA MASARU
 MIZUISHI HARUJI
 OOKAJI HIROYUKI
 TATSUMI KENZO
 MIZUSAWA HIROSHI
 AMAMIYA MASARU
 OHORI MAYUMI

(54) IMAGE FORMING DEVICE OF IN-CYLINDER PAPER DISCHARGE TYPE

(57)Abstract:

PROBLEM TO BE SOLVED: To observe a paper discharge tray without letting an operator stoop thereto during a copy by setting a paper discharge tray visible through an operation panel from the upper part of a front operation panel.

SOLUTION: A part of an operation panel 3 is formed of a transparent member so that a paper discharge tray 4 in a cylinder opening part 2 can be observed by the eyes 5 of an operator through an operation panel 3. In this case, it is so constituted that a cylindrical hole and a reflecting mirror are provided in the operation panel 3 and the cylinder opening part 2 so that the paper discharge tray 4 can be seen or the whole bodies of the operation panel 3 and a scanner part of the image forming device main body 1 which are integrated with together and positioned in the top part of the device main body are deviated rearward of the device so that the paper discharge tray 4 can be seen. This constitution can eliminate any necessity of the operator of stooping to the copy and watching the situation of the paper discharge.



LEGAL STATUS

[Date of request for examination] 20.06.2003

[Date of sending the examiner's decision of rejection] 26.07.2005

[Kind of final disposal of application other than the

*** NOTICES ***

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] Image formation equipment of the delivery type in a drum characterized by making it seen [the above-mentioned paper output tray] from the upper part of the above-mentioned front control panel over a control panel in the image formation equipment of the delivery type in a drum which delivers the transfer paper with which it has a control panel in the front face of the body of equipment, and the image was formed in it to the paper output tray of the disconnection circles in a drum formed in the body of equipment.

[Claim 2] The delivery type in a drum according to claim 1 characterized by making some above-mentioned control panels [at least] into transparence of image formation equipment.

[Claim 3] The delivery type in a drum according to claim 1 characterized by forming a tubed hole in the above-mentioned control panel of image formation equipment.

[Claim 4] The delivery type in a drum according to claim 1 characterized by preparing a reflecting mirror in the above-mentioned disconnection section in a drum, and making it seen [the paper output tray of the disconnection circles in a drum] from the upper part of a control panel of image formation equipment.

[Claim 5] The delivery type in a drum according to claim 1 characterized by the above-mentioned control panel and the scanner section being united, and image formation equipment being in the upper part of the body of equipment, and these having shifted to the whole behind equipment of image formation equipment.

[Translation done.]

* NOTICES *

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] Especially this invention relates to the image formation equipment of the type which discharges the transfer paper with which the image was formed to the paper output tray formed in equipment about electrophotography-type image formation equipment, such as a copying machine and facsimile.

[0002]

[Description of the Prior Art] With conventional image formation equipment, the paper output tray was prepared in the right-hand side or left-hand side of the body of equipment which carried out the core box. However, with such a configuration, when image formation equipment was installed, the tooth space of a part where the paper output tray other than the tooth space of a body projects had to be secured.

[0003] So, in JP,5-127457,A, as shown in drawing 7 and 8, the structure which formed the disconnection section 2 in a drum wide opened in the drum of the body 1 of image formation equipment, and formed the paper output tray 4 here is proposed. Since the paper output tray projected to one of right and left is lost with such a configuration, an installation tooth space can be made small.

[0004]

[Problem(s) to be Solved by the Invention] By the way, it is common to be prepared in the front face of the body 1 of equipment so that an operator may tend to operate a control panel 3 with such image formation equipment. Therefore, such a delivery type in a drum will be in the condition that the transfer paper to which paper was delivered hid in the drum. It is on an activity that the transfer paper to which paper was delivered does not appear from an operator's eyes, and it is very uneasy. Therefore, the scene in which the operator who repeats a copy activity while operating a front control panel or exchanging a manuscript stooped down the body, and looked at the condition of delivery at every copy was able to see.

[0005] In case this invention was considered from such a fact and an operator operates it, it aims at offering the image formation equipment of the delivery type in a drum with which an eye reaches a paper output tray most automatically.

[0006]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, this invention has a control panel in the front face of the body of equipment, and is characterized by making it seen [the above-mentioned paper output tray] from the upper part of the above-mentioned front control panel over a control panel in the image formation equipment of the delivery type in a drum which delivers the transfer paper with which the image was formed to the paper output tray of the disconnection circles in a drum formed in the body of equipment.

[0007] Moreover, as make some above-mentioned control panels [at least] into transparency, form a tubed hole in the above-mentioned control panel, or a reflecting mirror is prepared in the above-mentioned disconnection section in a drum, the above-mentioned control panel and the scanner section are united, and image formation equipment is [it is made seen / the paper output tray of the disconnection circles in a drum / from the upper part of a control panel, or] in the upper part of the body of equipment and these have shifted to the whole behind equipment, it can constitute.

[0008]

[Embodiment of the Invention] A drawing explains the example of this invention below. Drawing 1 is the side elevation showing the 1st example of this invention. Some control panels 3 are formed by the transparency

member, and it is made visible [the paper output tray 4 in the disconnection section 2 in a drum] to an operator's eyes 5 in this example through a control panel 3. By this, an operator loses need of leaning at every copy and observing the situation of delivery.

[0009] Drawing 2 and drawing 3 show the 2nd example of this invention. In this example, the tubed hole 6 penetrated to the disconnection section 2 in a drum to the control panel 3 is opened. An operator's eyes 5 can see a paper output tray 4 through this tubed hole 6. The include angle alpha of the tubed hole 6 will become the most legible if an operator's eyes 5 make it equal to the include angle theta of the look which looks at a paper output tray 4.

[0010] Drawing 4 and drawing 5 are drawings of the 3rd example of this invention. In this example, it folds up in the disconnection section 2 in a drum of the body of equipment, and the reflecting mirror 7 of a formula is formed. When a reflecting mirror 7 is raised in the location of a continuous line, a paper output tray 4 comes to be visible to an operator's eyes 5. When not working, a reflecting mirror 7 can be folded in a dotted line. This example is effective when neither the area pellucida nor a tubed hole can be formed in a control panel 3.

[0011] Drawing 6 is the 4th example of this invention. Although a control panel 3 and the scanner section 8 are united and it is prepared in the upper part of the body 1 of equipment with usual image formation equipment, this control panel 3 and the scanner section 8 are shifted to back one in this example. Even if such, an operator can see a paper output tray 4. However, since this example may have allowances in a back side although the depth dimension of image formation equipment becomes large only in d, and it is not necessary to enlarge magnitude of d like the paper output tray which projects right and left, depending on the case, it is also very effective.

[0012]

[Effect of the Invention] According to this invention, as explained above, in the delivery type image formation equipment in a drum, a paper output tray can be seen without an operator stooping down during a copy, it is space-saving and, moreover, image formation equipment excellent in workability can be obtained. It can respond, even when there are no allowances in the configuration using a reflecting mirror, then a control panel.

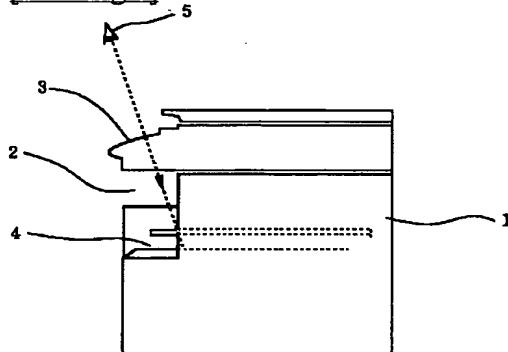
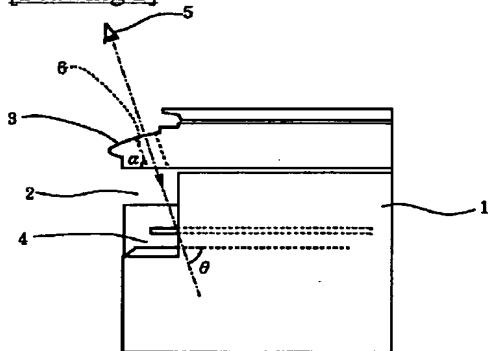
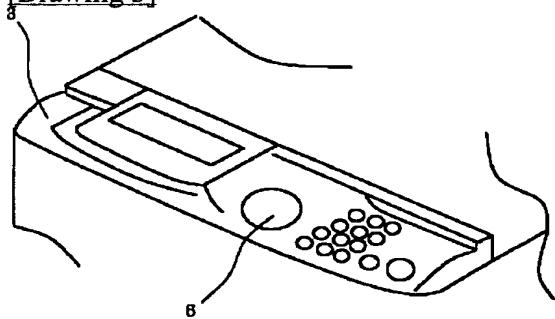
[Translation done.]

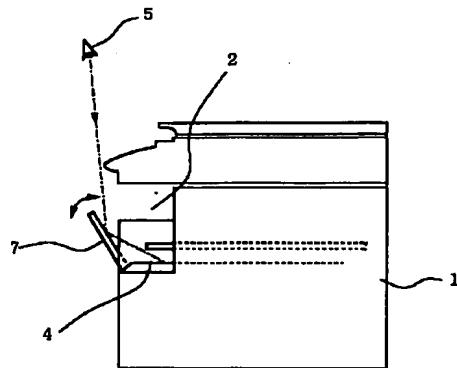
* NOTICES *

JPO and NCIPI are not responsible for any damages caused by the use of this translation.

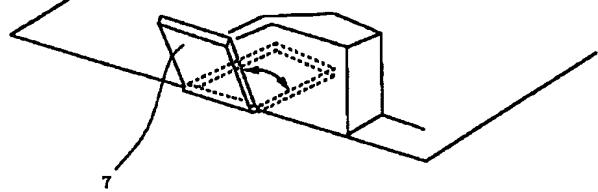
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

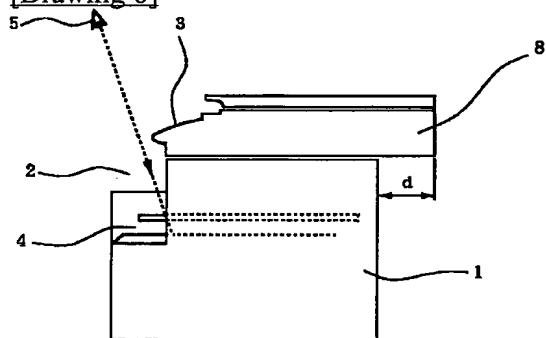
[Drawing 1]**[Drawing 2]****[Drawing 3]****[Drawing 4]**



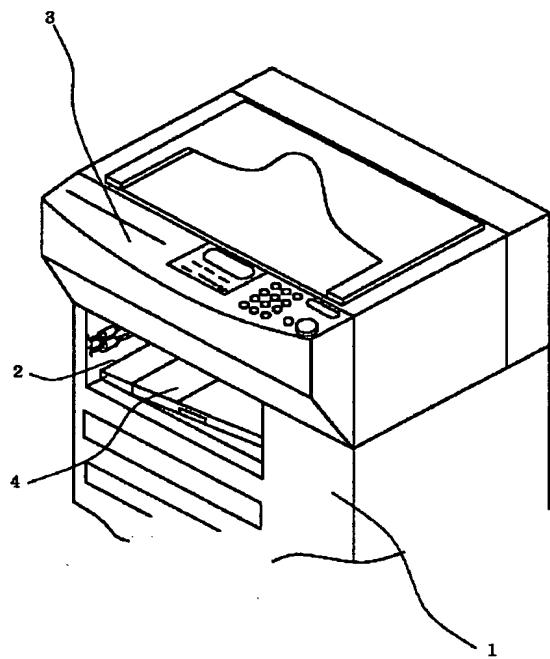
[Drawing 5]



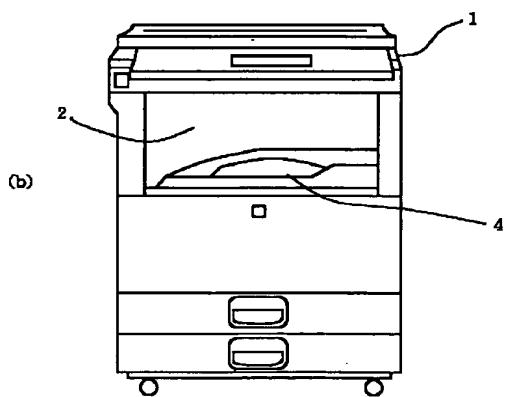
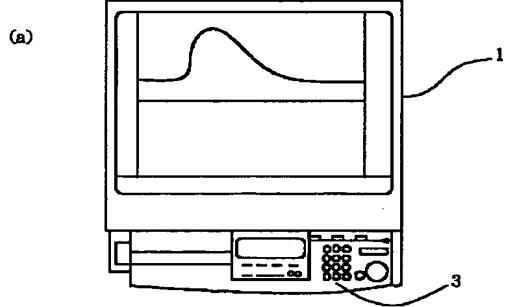
[Drawing 6]



[Drawing 7]



[Drawing 8]



[Translation done.]